



Department of Energy
National Nuclear Security Administration
Nevada Site Office
P.O. Box 98518
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JAN 30 2008

Tim Murphy, Chief
Bureau of Federal Facilities
Division of Environmental Protection
2030 East Flamingo Road, Suite 230
Las Vegas, NV 89119-0818

**SUBMITTAL OF FINAL POST-CLOSURE INSPECTION LETTER REPORT FOR
CORRECTIVE ACTION UNIT 91: AREA 3 U-3f INJECTION WELL, NEVADA TEST
SITE, NEVADA, REVISION 0, JANUARY 2008: DOE/NV--1037**

This letter serves as the post-closure monitoring letter report for the above Corrective Action Unit (CAU) for calendar year 2007.

CAU 91 is inspected every six months. The first inspection was conducted on March 29, 2007, and the second inspection was conducted on September 27, 2007. Vegetation growth around the edge of the aboveground monument concrete pad was observed during the March inspection. This vegetation was removed on May 24, 2007. All access roads, fences, gates, and signs were in excellent condition. No settling, cracking, or erosion was observed on the cover, and the use restriction had been maintained. No issues were identified, and no corrective actions were needed as a result of the September inspection.

The post-closure inspection checklists for CAU 91 are attached. Photographs and field notes taken during site inspections are maintained in the project files.

Please direct comments and questions to Kevin Cabbie, of my staff, at (702) 295-5000.

John B. Jones
Acting Federal Project Director
Environmental Restoration Project

ERP:3828.JR

Enclosure:
As stated

JAN 30 2008

cc w/encl. (uncontrolled):

C. D. Andres, NDEP, Las Vegas, NV
Public Reading Facility Coordinator, SNJV, Las Vegas, NV (electronic copy)
Northern Nevada Public Reading Room, Carson City, NV (1 electronic copy)
Southern Nevada Public Reading Facility, Las Vegas, NV (2 electronic copies)
Department of Natural Resources & Federal Facilities, Pahrump, NV (electronic copy)
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R. J. Poderis, NSTec, Las Vegas, NV
G. Richardson, NSTec, Las Vegas, NV
A. J. Silvas, NSTec, Las Vegas, NV
A. T. Urbon, NSTec, Las Vegas, NV
T. A. Thiele, NSTec, Las Vegas, NV
NSTec Document Production (electronic copy to OSTI)
R. F. Boehlecke, SNJV, Las Vegas, NV
EM Records, AMEM, Las Vegas, NV
K. J. Cabbie, ERP, NNSA/NSO, Las Vegas, NV

cc w/o encl:

D. C. Loewer, DTRA/CXT1, M/S 645, Mercury, NV
W. R. Griffin, SNJV/DTRA, M/S 645, Mercury, NV
NSTec Technical Information Officer, Las Vegas, NV
FFACO Group, PSG, NNSA/NSO, Las Vegas, NV
E. F. Di Sanza, WMP, NNSA/NSO, Las Vegas, NV

CAU 91: AREA 3 U-35 INJECTION WELL, POST-CLOSURE INSPECTION CHECKLIST

Inspection Date and Time: <u>3/29/07</u>	Reason for Inspection: Semi-annual	
Date of Last Inspection: <u>9/19/06</u>	Reason for Last Inspection: Semi-annual	
Responsible Agency: NSTec Environmental Restoration		
Address: Nevada Test Site, Mercury, Nevada		
Responsible Agency Official: Jeffrey L. Smith, Project Manager		
Chief Inspector: <u>Glenn Richardson</u>	Title: <u>Task Manager</u>	Organization: Environmental Restoration
Assistant Inspector: <u>Rob Baumert</u>	Title: <u>Field Tech Lead</u>	Organization: Environmental Restoration

A. GENERAL INSTRUCTIONS

1. All checklist items must be completed and detailed comments made to document the results of the site inspection. The completed checklist is part of the field record of the inspection. Additional pages should be used as necessary to ensure that a complete record is made. Attach the additional pages and number all pages upon completion of the inspection.
2. Any checklist line item marked by an inspector in a SHADED BOX must be fully explained or an appropriate reference to previous reports provided. The purpose of this requirement is to provide a written explanation of inspector observations and the inspector's rationale for conclusions and recommendations. Explanations are to be placed on additional attachments and cross-referenced appropriately. Explanations, in addition to narrative, will take the form of sketches, measurements, and annotated site maps.
3. The site inspection is a walking inspection of the entire site including the perimeter and sufficient transects to be able to inspect the entire surface and all features specifically described in this checklist.
4. A standard set of color photographs is required. In addition, all anomalous features or new features (such as changes in adjacent area land use) are to be photographed. A photograph log entry will be made for each photograph taken. The photographs will be maintained in the project files.
5. Field notes taken to assist in completion of this checklist will become part of the inspection record. No form is specified for field notes; however, they must be legible and in sufficient detail to enable review by succeeding inspectors and the responsible agency.
6. This unit will be inspected biannually with formal reporting to the Nevada Division of Environmental Protection to be done annually. The annual letter report will include a summary of the inspection, copies of this inspection checklist, and recommendations and conclusions.

B. PREPARATION (To be completed prior to site visit)

YES NO EXPLANATION

1. Has the Post-Closure Permit been reviewed?

✓

2. Have the design basis documents been reviewed?

✓

3. Have the site as-built plans and site base map been reviewed?

✓

4. Have the previous inspection reports been reviewed?

✓

a. Were anomalies or trends detected on previous inspections?

✓

b. Was maintenance performed?

✓

5. Have the site maintenance and repair records been reviewed?

✓

a. Has site repair resulted in a change from as-built conditions?

✓

b. Are revised as-built plans available that reflect repair changes?

N/A

C. SITE INSPECTION PREPARATION

Assemble the following, as needed, to conduct inspections:

- a. Camera, film, and batteries
- b. Keys to locks
- c. Clipboard
- d. Tape measure
- e. Radio, pager, etc.
- f. Previous Post-Closure Report, Inspection Checklists, repair records, and as-built plans
- g. Other miscellaneous support equipment

CAU 91: AREA 3 U-36 INJECTION WELL, POST-CLOSURE INSPECTION CHECKLIST

D. SITE INSPECTION	YES	NO	EXPLANATION
1. Adjacent off-site features:			
a. Have there been any changes in the use of the adjacent area?		✓	
b. Are there any new roads or trails?		✓	
c. Has there been any change in the position of nearby washes?		✓	
d. Has there been lateral excursion or erosion/deposition of nearby washes?		✓	
e. Are there new drainage channels?		✓	
f. Has there been a change in the surrounding vegetation?		✓	
2. Access roads, fences, gates, and signs:			
a. Is there a break in the fence?		✓	
b. Have any posts been damaged or their anchoring weakened?		✓	
c. Does the gate show evidence of tampering or damage?		✓	
d. Was the gate locked?	✓		
e. Is there any evidence of human intrusion onto the cover?		✓	
f. Is there any evidence of large animal intrusion onto the cover?		✓	
g. Have any signs been damaged or removed? (Number of signs replaced: ____)		✓	
h. Other?		✓	
3. Monuments and other permanent features:			
a. Have survey markers, boundary monuments, or monitoring stations been disturbed?		✓	
b. Do natural processes threaten the integrity of any survey marker, boundary monument or monitoring station?		✓	
c. Is there excessive vegetation around the survey markers, boundary monuments, or monitoring stations?	✓		Vegetation growth was discovered around the edge of the aboveground monument concrete pad.
d. Other?		✓	
4. Waste unit cover:			
a. Is there evidence of settling?		✓	
b. Is there evidence of cracking?		✓	
c. Is there evidence of erosion (wind or water)?		✓	
d. Is there evidence of animal burrowing?		✓	
e. Is there vegetation growing on the cover?		✓	
g. Other (including trash, debris, etc within fenced area)?		✓	

CAU 91: AREA 3 U-3fi INJECTION WELL, POST-CLOSURE INSPECTION CHECKLIST**5. Photograph Instructions:**

A total of 10 photographs are required to be taken during each inspection of CAU 91. Additional photographs may also be taken. The required photographs shall be taken as follows:

- Four (4) from the center of the unit, one in each compass direction (i.e., N, S, E, W),
- Four (4) of the unit from outside the fence, one in each compass direction, and
- Two (2) of the ER3-3 monitoring well surface with compass directions (N and S) noted on the photograph log.

6. Photograph Documentation:

YES	NO	EXPLANATION
<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	

a. Have all photographs required by the photograph instructions been taken?

b. Has a photograph log been prepared?
(Number of photographs taken: 10)

c. Other?

E. FIELD CONCLUSIONS

1. Is there an imminent hazard to the integrity of the unit?
(Immediate report required)

<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Person/Agency to whom report was made:

2. Are more frequent inspections required?

<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	-------------------------------------

3. Are existing maintenance/repair actions satisfactory?

<input checked="" type="checkbox"/>	<input type="checkbox"/>
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4. Is other maintenance/repair necessary?

<input type="checkbox"/>	<input checked="" type="checkbox"/>
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5. Field conclusions/recommendations:

Signage and fencing were in good condition. There was no evidence of animal burrowing. However, vegetation growth was noticed along the edge of the aboveground monument concrete pad. Vegetation removal will occur within 60 days.

F. CERTIFICATION

I have conducted an inspection of CAU 91, Area 3 U-3fi Injection Well, in accordance with the procedures of the Post-Closure Permit (including the Post-Closure Plan) as recorded on this checklist, attached sheets, field notes, photographs, and photograph logs.

Chief Inspector's Signature:

Date:

3/21/07

Printed Name:

Glenn Richardson

Title:

Task Manager

POST-CLOSURE INSPECTION CHECKLIST			
CAU 91: AREA 3 U-3fi INJECTION WELL - CAS 03-20-03: UD-6 and UD-6s Disposal Holes			
Inspection Date and Time: <u>9/27/07 9:42AM</u>	Reason for Inspection: <u>Semi-Annual</u>		
Date of Last Post-Closure Inspection: <u>3/29/07</u>	Reason for Last Post-Closure Inspection: <u>Semi-Annual</u>		
Responsible Entity: NSTec Environmental Restoration, Nevada Test Site, Mercury, Nevada			
Responsible Facility Owner: Jeffrey L. Smith, Deputy Manager, Environmental Restoration			
Chief Inspector: <u>Glenn Richardson</u>	Title: <u>Task Manager</u>	Organization: Environmental Restoration	
Assistant Inspector: <u>Mario Vasquez</u>	Title: <u>ER Safety</u>	Organization: Environmental Restoration	
A. GENERAL INSTRUCTIONS <ol style="list-style-type: none"> 1. All checklist items must be completed and detailed comments made to document the results of the site inspection. The completed checklist is part of the field record of the inspection. Additional pages should be used as necessary to ensure that a complete record is made. Attach the additional pages and number all pages upon completion of the inspection. 2. Any checklist line item marked by an inspector in a SHADED BOX must be fully explained or an appropriate reference to previous reports provided. The purpose of this requirement is to provide a written explanation of inspector observations and the inspector's rationale for conclusions and recommendations. Explanations are to be placed on additional attachments and cross-referenced appropriately. Explanations, in addition to narrative, will take the form of sketches, measurements, and annotated site maps. 3. The site inspection is a walking inspection of the entire site including the perimeter and sufficient transects to be able to inspect the entire surface and all features specifically described in this checklist. 4. A standard set of color photographs is required. In addition, all anomalous features or new features (such as changes in adjacent area land use) are to be photographed. A photograph log entry will be made for each photograph taken. The photographs will be maintained in the project files. 5. Field notes taken to assist in completion of this checklist will become part of the inspection record. No form is specified for field notes; however, they must be legible and in sufficient detail to enable review by succeeding inspectors and the responsible agency. 6. This unit will be inspected semi-annually with formal reporting to the Nevada Division of Environmental Protection to be done annually. The annual letter report will include a summary of the inspection, copies of this inspection checklist, and recommendations and conclusions. 			
B. PREPARATION (To be completed prior to site visit)	YES	NO	EXPLANATION (required if shaded box is checked)
1. Has the Post-Closure Permit been reviewed?	✓		
2. Has the Post-Closure Permit application been reviewed?	✓		
3. Has the Post-Closure Plan been reviewed?	✓		
4. Have the site as-built plans and site base map been reviewed?	✓		
5. Have the previous inspection reports been reviewed?	✓		
a. Were anomalies or trends detected on previous inspections?		✓	
b. Was maintenance performed?	✓		Vegetation removal activities were completed on 5/24/07 as a result of the last inspection.
If maintenance was performed, has a copy of the maintenance records been obtained?			NA ✓
6. Have the site maintenance and repair records been reviewed?	✓		
a. If so, has site repair resulted in a change from as-built conditions?			NA ✓
b. If yes (to 6a), are revised as-built plans available that reflect repair changes?			NA ✓

POST-CLOSURE INSPECTION CHECKLIST

CAU 91: AREA 3 U-3fi INJECTION WELL - CAS 03-20-03: UD-6 and UD-6s Disposal Holes

C. SITE INSPECTION PREPARATION

Assemble the following, as needed, to conduct inspections:

- a. Camera, film, and batteries
- b. Keys to locks
- c. Clipboard
- d. Tape measure
- e. Radio, pager, etc.
- f. Previous Post-Closure Report, Inspection Checklists, repair records, and as-built plans
- g. Other miscellaneous support equipment

D. SITE INSPECTION

1. Adjacent off-site features: YES NO EXPLANATION (required if shaded box is checked)

- a. Are there any new activities or features in the vicinity that could potentially affect the site (e.g., activities that change the flow of surface water or are encroaching the unit)?

✓

2. Fences, gates, and signs:

YES

NO

EXPLANATION (required if shaded box is checked)

- a. Is there damage to or a break in the fence?

✓

- b. Have any fenceposts been damaged or their anchoring weakened?

✓

- c. Is the gate intact and functional?

✓

- d. Does the gate show evidence of tampering or damage?

✓

- e. Was the gate locked?

✓

- f. Are any of the use restriction signs damaged or missing?

✓

- g. Are all use restriction signs legible?

✓

- h. How many use restriction signs need to be replaced?

0

- i. Other?

NA

✓

4. Waste unit cover:

YES

NO

EXPLANATION (required if shaded box is checked)

- a. Is there evidence of settling?

✓

- b. Is there evidence of cracking?

✓

- c. Is there evidence of erosion (wind or water)?

✓

- d. Is there evidence of human intrusion onto the cover?

✓

- e. Is there evidence of large animal intrusion onto the cover?

✓

- f. Is there evidence of animal burrowing?

✓

- g. Is vegetation growing on the cover?

✓

- h. Other (including trash, debris, etc within fenced area)?

NA

✓

POST-CLOSURE INSPECTION CHECKLIST

CAU 91: AREA 3 U-3fi INJECTION WELL - CAS 03-20-03: UD-6 and UD-6s Disposal Holes

5. Photograph Instructions:

A total of 10 photographs are required to be taken during each inspection of CAU 91. Additional photographs may also be taken. The required photographs shall be taken as follows:

- Four (4) from the center of the unit, one in each compass direction (i.e., N, S, E, W),
- Four (4) of the unit from outside the fence, one in each compass direction, and
- Two (2) of the ER3-3 monitoring well surface with compass directions (N and S) noted on the photograph log.

6. Photograph Documentation:

a. Have all photographs been taken as required by the photograph instructions?

YES

NO

EXPLANATION (required if shaded box is checked)

☒

b. Has a photograph log been prepared?

☒

Log number:

c. How many photographs were taken?

10

d. Other?

NA

☒

E. FIELD CONCLUSIONS

YES

NO

EXPLANATION (required if shaded box is checked)

1. Are more frequent inspections required?

☐

☒

2. Are existing maintenance/repair actions satisfactory?

☒

☐

3. Is other maintenance/repair necessary?

☐

☒

4. Is there an imminent hazard to the integrity of the site?
(Immediate report required)

☐

☒

Date reported: _____

Person/Agency to whom report was made: _____

5. Field conclusions/recommendations:

The signs and fencing were in good condition. Also, there was no evidence of vegetation growth or animal burrows within the fenced area.

F. CERTIFICATION

I have conducted an inspection of CAU 91, Area 3 U-3fi Injection Well, in accordance with the procedures of the Post-Closure Permit (including the Post-Closure Plan) as recorded on this checklist, attached sheets, field notes, photographs, and photograph logs.

Chief Inspector's Signature: _____

Date:

9/27/07

Printed Name:

Glenn Richardson

Title:

Task Manager

Attachments (check if attached):

- ☒ Field Notes
- ☐ Photos
- ☐ Maintenance records